IAP15 Rec'd PCT/PTO 03 AUG 2006

PTO-1390 (Rev. 07-2005)

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TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATEDIES ECTED OFFICE (DO/FO/US)

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ATTORNEY'S DOCKET NUMBER TSY-001PCT/US

CONCERNING A SUBMISSION UNDER 35 U.S.C. 371	U.S. APPLICATION NO. (Fkingwin, see 37 CFR 1.5)						
INTERNATIONAL APPLICATION NO. INTERNATIONAL FILING DATE	FRIORITY DATE CLAIMED 6 Feb 2004 (06.02.2004)						
PCT/US2005/003792	6 Feb 2004 (00.02.2004)						
Single Stage Membrane Reactor for High Purity Hydrogen Production							
APPLICANT(S) FOR DO/EO/US							
David Tsay et al. Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:							
1. X This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.							
2. This is a SECOND or SUBSEQUENT submission of items concerning a submission	This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.						
This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.							
The US has been elected (Article 31).							
A copy of the International Application as filed (35 U.S.C. 371(c)(2))							
a. XX is attached hereto (required only if not communicated by the Internation	a. XX is attached hereto (required only if not communicated by the International Bureau).						
b. has been communicated by the International Bureau.	b. has been communicated by the International Bureau.						
	c. XX is not required, as the application was filed in the United States Receiving Office (RO/US).						
6. An English language translation of the International Application as filed (35 U.S.	An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).						
a. Lis attached hereto.							
b. L has been previously submitted under 35 U.S.C. 154(d)(4).							
	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))						
a. are attached hereto (required only if not communicated by the International Communicated Communicate	a are attached hereto (required only if not communicated by the International Bureau).						
b. have been communicated by the International Bureau.	b. have been communicated by the International Bureau.						
c. have not been made; however, the time limit for making such amend	ments has NOT expired.						
d. XX have not been made and will not be made.	d. XX have not been made and will not be made.						
8. An English language translation of the amendments to the claims under PCT A	An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).						
9. XX An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).							
10. An English language translation of the annexes of the International Preliminary Article 36 (35 U.S.C. 371(c)(5)).	Examination Report under PCT						
Items 11 to 20 below concern document(s) or information included:							
11. XX An Information Disclosure Statement under 37 CFR 1.97 and 1.98. + refe	rence copies						
12. An assignment document for recording. A separate cover sheet in compliance v	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.						
13. A preliminary amendment.	A preliminary amendment.						
14. An Application Data Sheet under 37 CFR 1.76.	An Application Data Sheet under 37 CFR 1.76.						
15. A substitute specification.	·						
	A power of attorney and/or change of address letter. (included with inventor Declaration)						
17. A computer-readable form of the sequence listing in accordance with PCT Rule	A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.						
18. A second copy of the published International Application under 35 U.S.C. 154(d	A second copy of the published International Application under 35 U.S.C. 154(d)(4).						
19. A second copy of the English language translation of the international application	on under 35 U.S.C. 154(d)(4).						

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Page 1 of 3

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U.S. APPLAGA	S. APPLICATION NO. PCT/US2005/003792		ATTORNEY'S DOCKET NUMBER TSY-001PCT/US		
10					
20. Othe	r items or information:				
1					
The fol	lowing fees have been submitted				
	ic national fee (37 CFR 1.492(a)).			CALCULATIONS	PTO USE ONLY
	mination fee (37 CFR 1.492(c))		\$300	\$ 300.00	
-		Y£.	5		
If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)\$0			\$ -0-		
			\$200		
23. XX Sear	rch fee (37 CFR 1.492(b))	YES)		
If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)					
International Searching Authority				\$ -O-	
International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB					
All other situation	S	D	\$400 \$500		
	TOTAL OF 21 22 and 23 =			\$300.00	
	e for specification and drawings file e listing in compliance with 37 CFF medium) (37 CFP 1 492(1))	ed in paper over 100 sheets (e	xcluding		
	medium) (37 CFR 1.492(j)). \$250 for each additional 50 sheet		logram usung in an		
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Surcharge of \$130	0.00 for furnishing any of the search	ch fee, examination fee, or the	oath or declaration		
CLAIMS	state in the mational state	ge (37 CFR 1.492(h)).		\$	_
Total claims	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Independent claim	20 -20 =	0	× \$ 50	\$ -0-	
		0	× \$200	\$ -0-	
MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$360			\$ N/A		
TOTAL OF ABOVE CALCULATIONS = (k) Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.			\$ 300.00		
			150.00		
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest			\$ 150.00		
daimed priority dat	te (37 CFR 1.492(i)).	oldin oo monu	+	\$ N/A	
TOTAL NATIONAL FEE =			\$ 150.00		
ee for recording the same of t	he enclosed assignment (37 CFR cover sheet (37 CFR 3.28, 3.31). \$	1.21(h)). The assignment mus		s	
			+	N/A	
TOTAL FEES ENCLOSED =			\$ 150.00		
				Amount to be refunded:	\$
				Amount to be charged	\$

10/588575 IAP11 Rec'd PCT/PTO 03 AUG 2006 PTO-1390 (Rev. 07-2005)

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a. \times A check in the amount of \$ 150.00 to cover the above fees is enclosed. Please charge my Deposit Account No. _ in the amount of \$ _ __ to cover the above fees. A duplicate copy of this sheet is enclosed. c. LXK The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-1139. A duplicate copy of this sheet is enclosed. Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card Information should not be included on this form. Provide credit card information and authorization on PTO-2038. NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status. SEND ALL CORRESPONDENCE TO: David Silverstein David Silverstein Andover-IP-Law 44 Park Street, Suite 300 NAME Andover, MA 01810 26,336 REGISTRATION NUMBER EXPRESS MAILING UNDER 37 C.F.R. \$ 1.10* · (Express Mail label number is mandatory.) (Express Mail certification is optional.) I hereby certify that this paper, along with any document referred to, is being deposited with the United States Postal Service on this date August 3, 2006 ____ in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as "Express Mail Post Office to Addressee" Mailing Label No. ___EQ_142620612_US Leslie R. Silverstein (type or print name of person mailing paper)

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IN THE UNITED STATES PATENT OFFICE AS DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

Applicant:

David Tsay et al.

International Application No.:

PCT/US2005/003792

International Filing Date:

4 Feb 2005 (04.02.2005)

Title:

SINGLE STAGE MEMBRANE REACTOR FOR HIGH PURITY HYDROGEN PRODUCTION

Agent's File Reference:

TSY-001PCT/US

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

> "Express Mail" Mailing Label Number: EQ 142620612 US Date of Deposit: August 3, 2006

I hereby certify that the attached international application PCT/US2005/003792 published as WO 2005/077818, a Transmittal Letter Under 35 U.S.C. 371, an executed Declaration/Power of Attorney, an Information Disclosure Statement and reference copies, check for \$150.00, and a mailroom postcard are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and are addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Leslie R. Silverstein
(Type or print name of person mailing paper)

(Signature of person mailing paper)